

2019

Detroit Regional Office

22345 Roethel Drive  
P.O. Box 8022  
Novi, MI 48375  
(810) 344-1770  
Fax (810) 344-2654

**Clayton**  
ENVIRONMENTAL  
CONSULTANTS

February 12, 1996

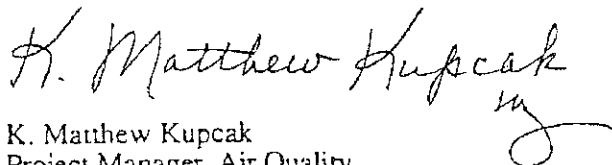
Ms. Nina Dralyuk  
Permit Clerk  
Ohio Environmental Protection Agency,  
Cleveland Bureau of Air Pollution Control  
1925 St. Clair Avenue  
Cleveland, Ohio 44114

Dear Ms. Dralyuk:

Enclosed please find three (3) copies of the Permit to Operate renewal application for the vapor degreaser system (VPD-24) located at the Morgan Matroc, Inc. Electro Ceramics Division. The vapor degreaser system is currently operating under Ohio EPA Permit to Operate Application No. 1318031627P019. This application is being filed in order to renew the existing permit. Please note that in November of 1994, Morgan Matroc, Inc. replaced the existing cover, vapor level control thermostat and freeboard chiller on their vapor degreaser with new equipment.

If you have any questions, please call me at (810) 344-1770.

Sincerely,



K. Matthew Kupcak  
Project Manager, Air Quality  
Environmental Management and Remediation Services

Detroit Regional Office

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22345 Roethel Drive  
P.O. Box 8022  
Novi, MI 48375  
(810) 344-1770  
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**Clayton**  
ENVIRONMENTAL  
CONSULTANTS

February 12, 1996

Mr. Bill Hocevar  
Facilities Manager  
MORGAN MATROC, INC.  
232 Forbes Road  
Bedford, Ohio 44146

Dear Mr. Hocevar:

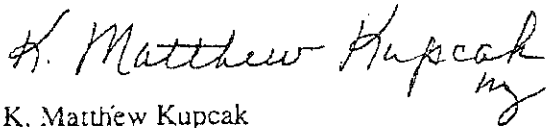
Enclosed please find four (4) copies of the Permit to Operate renewal application for the vapor degreaser system (VPD-24).

Please review the application and sign three (3) copies for submittal to the Ohio Environmental Protection Agency (OEPA), Cleveland Bureau of Air Pollution Control. The fourth copy should be kept on record at the facility. The three signed copies are to be sent along with the enclosed transmittal letter to:

Ms. Nina Dralyuk  
Permit Clerk  
OEPA, Cleveland Bureau of Air      Pollution Control  
1925 St. Clair Avenue  
Cleveland, Ohio 44114

Clayton has appreciated the opportunity to assist Morgan Matroc, Inc. in preparing this application. If you have any questions, or if Clayton can be of further assistance, please call me at (810) 344-1770.

Sincerely,



K. Matthew Kupcak  
Project Manager, Air Quality  
Environmental Management and Remediation Services

Detroit Regional Office

cc: Kenneth Kupcak

**APPLICATION FOR RENEWAL OF PERMIT TO OPERATE  
APPLICATION NO. 1318031627P019**

**Submitted to:  
Ohio Environmental Protection Agency  
Cleveland Bureau of Air Pollution Control  
1925 St. Clair Avenue  
Cleveland, Ohio 44114**

**Prepared by:  
Clayton Environmental Consultants, Inc.  
Detroit Regional Office**

**Clayton Project No. 67604.00**

**Clayton**  
**ENVIRONMENTAL  
CONSULTANTS**

FOR OHIO EPA USE ONLY:

DATE APPLICATION RECEIVED: \_\_\_\_\_

FACILITY ID: \_\_\_\_\_

EMISSIONS UNIT(S) ID(S): \_\_\_\_\_

## OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) APPLICATION FOR STATE PERMIT(S) TO OPERATE AN EMISSIONS UNIT(S)

(Do not complete application without reading instructions.)

1. Facility Information:

a. Applicant Name: Morgan Matroc, Inc.

b. Facility Name: Morgan Matroc Electro Ceramics Division

c. Facility Location: \_\_\_\_\_

Street: 232 Forbes Road

City/Village/Township: Bedford

County: Cuyahoga

Zip Code: 44146-5478

d. Primary Facility Contact Name: Bill Hocevar

e. Primary Facility Contact Mailing Address/Phone Number:

Street: 232 Forbes Road

City/Village/Township: Bedford

State: Ohio

Zip Code: 44146-5478

Phone Number: (216) 232-8600

f. OEPA Facility Identification (ID) Number (10-digit number): 318031627

g. Facility Primary Standard Industrial Classification (SIC) Code Number (4-digit number): 3262

h. Authorized Individual Signature:

I, being the individual specified in Ohio Administrative Code (OAC) rule 3745-35-02(B), hereby apply for Permit(s) to Operate (PTO) the emissions unit(s) described herein.

Bill Hocevar

Authorized Individual's Name (Please type or print):

\_\_\_\_\_  
Authorized Individual's Signature

\_\_\_\_\_  
Date Signed

Facilities Manager

\_\_\_\_\_  
Title

2. Emissions Unit Information (make a copy of pages 3-7 and attach for each emissions unit listed on page 2):

- a. OEPA Emissions Unit ID (4-digit) number: P019
- b. Company ID for Emissions Unit: VFD-24
- c. Emissions Unit Activity Description: 3 Poling rigs and two drying ovens for the preparation (polarization) of ceramic piezoelectric materials.
- d. Equipment Description: \_\_\_\_\_
- e. Initial Installation Date (month/year): 01/1961  
Initial Startup Date (month/year): 01/1961  
Most Recent Modification Date (if applicable)  
(as defined in OAC rule 3745-31-01(J)) (month/year): 10/1994
- f. Emissions Information:

Complete the following table for each criteria air pollutant proposed to be emitted from the emissions unit at a rate greater than one ton/year (list each pollutant on a separate line), and for any pollutant for which an emissions limit has been established (per a state or federal regulation or Permit to Install) which limits air emissions of the pollutant to less than one ton/year.

| Pollutant Name | Proposed Maximum Hourly Emissions (pounds/hour) | Proposed Maximum Annual Emissions (tons/year) |
|----------------|---|---|
|                |   |   |
|                |   |   |
|                |   |   |
|                |   |   |
|                |   |   |

(If additional pollutants need to be identified, copy this page and attach the additional page(s). Check here \_\_\_\_\_ if additional copies of this page are attached.)

g. Proposed Operating Schedule:

Average: Hours/Day: 24 Maximum: Hours/Day: 24  
Hours/Year: 5880 Hours/Year: 6240

xiii. Supplemental control device information (see instructions)

Control Device #1 \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Control Device #2 \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Control Device #3 \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- i. Emissions Egress Point(s) Information: (Provide the following information for each point at which emissions are released into the ambient air from the emissions unit and list each individual egress point on a separate line.)

Egress point description codes:

☒ A. Vertical stack (unobstructed)

☐ B. Horizontal/downward stack

☐ C. Vertical stack (obstructed)

☐ D. Fugitive

| Company ID for Egress Point | Description Code |
|-----------------------------|------------------|
| VPD-24                      | A                |
|                             |                  |
|                             |                  |
|                             |                  |
|                             |                  |
|                             |                  |
|                             |                  |
|                             |                  |
|                             |                  |
|                             |                  |

- j. A Process or Activity Flow Diagram must be submitted for each emissions unit included in the application. Include the OEPA Emission Unit ID and company submitted. Show entry and exit points of all raw materials, intermediate products, by-products and finished products. Label all materials, including air pollution emissions and other waste materials, and identify material and exhaust gas flow rates. Label the process equipment, emissions control equipment, and emissions egress points utilized.

- i. identification of the specific information (item # and description) submitted within the application for the emissions unit which is being claimed as a trade secret;
- ii. an explanation of why the information specified is indeed a trade secret;
- iii. confirmation that the alleged trade secret is not revealed by inspection or analysis of any marketed product (example: "reverse chemistry"); and
- iv. identification of security measures which have been adopted to ensure secrecy, and confirmation that reasonable or enforceable agreements or other confidential relationships prohibiting use or disclosure of the secret existed with those whom the secret was revealed (example: employee secrecy agreements and/or contractor agreements).

Finally, if a confidentiality claim is being submitted, two copies of the application need to be submitted, one completed version with all the information requested and one "sanitized" version containing all information requested except that information upon which a trade secret claim is being made.

n. Emissions Activity Category Forms:

The appropriate Emissions Activity Category (EAC) form(s) must be completed and attached for each emission unit. At least one complete EAC form must be submitted for each emission unit for the application to be considered complete. Please identify each EAC form completed and being submitted with this application for this emissions unit:

EAC form ID number (see instructions for list of EAC forms)

i. 3100 Process Operation

iii. \_\_\_\_\_

ii. \_\_\_\_\_

iv. \_\_\_\_\_

FOR OHIO EPA USE ONLY  
 DATE APPLICATION RECEIVED: \_\_\_\_\_  
 FACILITY ID: \_\_\_\_\_

## EMISSIONS ACTIVITY CATEGORY FORM PROCESS OPERATION

OEPA EMISSIONS UNIT ID VPD-24 (if established)

[Note: If there is more than one end product for this process, copy and complete this page for each additional product (see instructions).]

1. End product of this process: Clean, dry polarized ceramics
2. Hourly production rates (indicate appropriate units):  
     Average production: 29 lbs  
     Maximum production: 58 lbs
3. Projected maximum annual production (indicate appropriate units): 30,000 lbs
4. Actual annual production (indicate appropriate units): 130,000 lbs
5. Type of operation:  
     ☒ continuous  
     ☐ batch; if batch indicate:  
         minimum cycle time \_\_\_\_\_ minutes  
         minimum time between cycles \_\_\_\_\_ minutes
6. Materials used in process at maximum hourly production rate:

| Material | Physical State at Standard Conditions | Principal Use | Amount (lbs/hr) |
|----------|---------------------------------------|---------------|-----------------|
| Ceramic  | Solid                                 | End Product   | 29.0            |
|          |                                       |               |                 |
|          |                                       |               |                 |
|          |                                       |               |                 |
|          |                                       |               |                 |
|          |                                       |               |                 |
|          |                                       |               |                 |



2. Emissions Unit Information (make a copy of pages 3-7 and attach for each emissions unit listed on page 2):

a. OEPA Emissions Unit ID (4-digit) number: NE

b. Company ID for Emissions Unit: VPD-24 (modified)

c. Emissions Unit Activity Description: Vapor degreasing operation.

d. Equipment Description: Vapor degreaser equipped with cover, vapor level control thermostat and free board chiller.

e. Initial Installation Date (month/year): 1961  
Initial Startup Date (month/year): 1961  
Most Recent Modification Date (if applicable)  
(as defined in OAC rule 3745-31-01(J)) (month/year): 10/1994

f. Emissions Information:

Complete the following table for each criteria air pollutant proposed to be emitted from the emissions unit at a rate greater than one ton/year (list each pollutant on a separate line), and for any pollutant for which an emissions limit has been established (per a state or federal regulation or Permit to Install) which limits air emissions of the pollutant to less than one ton/year.

| Pollutant Name | Proposed Maximum Hourly Emissions (pounds/hour) | Proposed Maximum Annual Emissions (tons/year) |
|----------------|---|---|
| VOC            | 1.57 lbs/hr                                     | 4.62 TPY                                      |
|                | SEE ATTACHMENT A                                |   |
|                |   |   |
|                |   |   |
|                |   |   |

(If additional pollutants need to be identified, copy this page and attach the additional page(s). Check here ☐ if additional copies of this page are attached.)

g. Proposed Operating Schedule:

Average: Hours/Day: 24 Maximum: Hours/Day: 24  
Hours/Year: 5880 Hours/Year: 5880

xiii. Supplemental control device information (see instructions)

Control Device #1 \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Control Device #2 \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Control Device #3 \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- i. Emissions Egress Point(s) Information: (Provide the following information for each point at which emissions are released into the ambient air from the emissions unit and list each individual egress point on a separate line.)

Egress point description codes:

A. Vertical stack (unobstructed)

B. Horizontal/downward stack

C. Vertical stack (obstructed)

☒ D. Fugitive

| Company ID for Egress Point | Description Code |
|-----------------------------|------------------|
| VPD-24                      | D                |
|                             |                  |
|                             |                  |
|                             |                  |
|                             |                  |
|                             |                  |
|                             |                  |
|                             |                  |
|                             |                  |
|                             |                  |

- j. A Process or Activity Flow Diagram must be submitted for each emissions unit included in the application. Include the OEPA Emission Unit ID and company identification for the emissions unit on each process or activity flow diagram submitted. Show entry and exit points of all raw materials, intermediate products, by-products and finished products. Label all materials, including air pollution emissions and other waste materials, and identify material and exhaust gas flow rates. Label the process equipment, emissions control equipment, and emissions egress points utilized.

- i. identification of the specific information (item # and description) submitted within the application for the emissions unit which is being claimed as a trade secret;
- ii. an explanation of why the information specified is indeed a trade secret;
- iii. confirmation that the alleged trade secret is not revealed by inspection or analysis of any marketed product (example: "reverse chemistry"); and
- iv. identification of security measures which have been adopted to ensure secrecy, and confirmation that reasonable or enforceable agreements or other confidential relationships prohibiting use or disclosure of the secret existed with those whom the secret was revealed (example: employee secrecy agreements and/or contractor agreements).

Finally, if a confidentiality claim is being submitted, two copies of the application need to be submitted, one completed version with all the information requested and one "sanitized" version containing all information requested except that information upon which a trade secret claim is being made.

n. Emissions Activity Category Forms:

The appropriate Emissions Activity Category (EAC) form(s) must be completed and attached for each emission unit. At least one complete EAC form must be submitted for each emission unit for the application to be considered complete. Please identify each EAC form completed and being submitted with this application for this emissions unit:

EAC form ID number (see instructions for list of EAC forms)

- |                              |            |
|------------------------------|------------|
| i. <u>3109 Solvent Metal</u> | iii. _____ |
| ii. <u>Cleaning</u>          | iv. _____  |

FOR OHIO EPA USE ONLY  
DATE APPLICATION RECEIVED \_\_\_\_\_  
FACILITY ID: \_\_\_\_\_

## EMISSIONS ACTIVITY CATEGORY FORM SOLVENT METAL CLEANING

OEPA EMISSIONS UNIT ID NE (if established)

1. The following type of equipment is used for cleaning and removing soils from metal surfaces (check one):

☐ Cold Cleaner

Manual or batch loaded process which uses solvent maintained below its boiling point.

☒ Open top vapor degreaser

Batch loaded process which uses vaporized solvent for cleaning.

☐ Conveyorized degreaser

Continuously loaded conveyorized process which uses either vaporized solvent or liquid solvent for cleaning (vapor or liquid in a container).

2. Complete the following table for all metal parts or products cleaned

| Description of Parts/Products | Average Quantity Cleaned (per hour) | Maximum Quantity Cleaned (per hour) |
|-------------------------------|-------------------------------------|-------------------------------------|
| Ceramic Products              | 200                                 | 400                                 |
|                               |                                     |                                     |
|                               |                                     |                                     |
|                               |                                     |                                     |

3. Complete the following table for all solvents used

| Solvent           | Maximum Gallons Used Throughout Year | % Usage for Winter | % Usage for Spring | % Usage for Summer | % Usage for Fall | Vapor Pressure (psia @ 100 °F) |
|-------------------|--------------------------------------|--------------------|--------------------|--------------------|------------------|--------------------------------|
| Perchloroethylene | 622                                  | 25                 | 25                 | 25                 | 25               | N/A                            |
|                   |                                      |                    |                    |                    |                  |                                |
|                   |                                      |                    |                    |                    |                  |                                |
|                   |                                      |                    |                    |                    |                  |                                |

4. Minimum amount of solvent waste disposed of throughout the year: 622 gallons

5. Average solvent content of solvent waste: 75 percent by volume
6. In the space below, describe how operators are trained in operating procedures for reducing solvent losses and evaporation.

Operators are trained by their direct supervisor before beginning work in area.

7. Where are the operating instructions posted On front of degreaser.

8. Method of solvent waste disposal (check one or more):

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Industrial waste collection service | <input type="checkbox"/> Reclamation service which collects, distills and returns the reclaimed portion of waste solvent to the user |
| <input type="checkbox"/> In-house reclamation with distillation column  | <input type="checkbox"/> Waste solvent disposal facility (e.g., landfill, incineration, etc.)  |
| <input type="checkbox"/> Deep well injection                            | <input type="checkbox"/> Other, specify _____  |

#### COLD CLEANER INFORMATION

9. Identify cold cleaner equipment: \_\_\_\_\_

10. Is this cold cleaner equipped with a cover? ☐ Yes ☐ No

Is this cover easily operated with one hand? ☐ Yes ☐ No

When is cold cleaner covered? \_\_\_\_\_

11. Cold cleaner has (check one or more)

- |  |  |
|--|--|
| <input type="checkbox"/> None of the below   | <input type="checkbox"/> Water cover   |
| <input type="checkbox"/> Refrigerated chiller<br>Maximum operating temperature: _____ °F | <input type="checkbox"/> Carbon adsorption (must complete Question 31)               |
|  | <input type="checkbox"/> Other system for reducing solvent emissions, specify: _____ |

12. Solvent is: ☐ Sprayed ☐ Heated, temperature: \_\_\_\_\_°F

Agitated by: ☐ Use of pumping ☐ Compressed air ☐ Vertical Motion  
☐ Ultrasonics ☐ None of the above

13. Describe the method for draining excess solvent off cleaned parts:

14. Tank dimensions

Length: \_\_\_\_\_ in  
Width: \_\_\_\_\_ in  
Height: \_\_\_\_\_ in

15. Tank Capacity

\_\_\_\_\_ gal

16. Freeboard information

Height (distance from solvent surface to top edge of the degreaser tank): \_\_\_\_\_ in  
Width (width, not length, at the solvent surface) \_\_\_\_\_ in  
Ratio (height/width): \_\_\_\_\_

#### OPEN TOP VAPOR DEGREASER INFORMATION

17. Identify open top vapor degreaser equipment: VPD-24

18. Is the vapor degreaser equipped with a cover?

☒ Yes ☐ No

Is the cover powered?

☐ Yes ☒ No

19. When is the vapor degreaser covered?

Vapor degreased is covered except when  
loading and unloading cleaning batches.

Are there any fixed spray nozzles?

☐ Yes ☒ No

20. Dimensions of top opening

Length: 48.0  
Width: 23.5

21. Freeboard information

Height (distance from solvent surface to top edge of the degreaser tank): 17.5 in.  
Width (width, not length, at the solvent surface): 23.5 in.  
Ratio (height/width): 0.74

22. Open top degreaser has (check one or more).

- ☐ None of the below
- ☐ Refrigerated freeboard chiller, operating temperature \_\_\_\_\_ °F
- ☒ Refrigerated condenser coil, operating temperature 30-70 °F
- ☒ Enclosed design in which the cover or door opens only when the part is actually entering or exiting the degreaser
- ☐ Carbon adsorption system (must complete Question 31)
- ☐ Other control system, excluding condenser coils and freeboard water jacket, which reduces solvent emissions. Specify system and percent control efficiency:

23. Identify safety switches that are installed and operating (check one or more):

- ☐ None of the below
- ☐ Condenser flow switch and thermostat which shuts off the sump heat if the condenser coolant is either not circulating or too warm.
- ☐ Device, other than a condenser flow switch and thermostat, which shuts off the sump heat if the condenser coolant is either not circulating or too warm. Specify:
- ☐ Spray safety switch shuts off the spray pump if the vapor level drops below any fixed spray nozzle
- ☒ Vapor level control thermostat which shuts off the sump heat when vapor level rises too high.
- ☐ Device, other than a vapor level control thermostat, which shuts off the sump heat when the vapor level rises too high. Specify:

#### CONVEYORIZED DEGREASER INFORMATION

24. Identify conveyORIZED degreaser equipment:

25. Is this conveyORIZED degreaser a vapor degreaser?

- ☐ Yes If yes, are there any fixed spray nozzles? ☐ Yes ☐ No
- ☐ No If no, provide the maximum operating temperature of the solvent: \_\_\_\_\_ °F

26. Is this conveyorized degreaser equipped with downtime covers?

☐ Yes

How soon after conveyor and exhaust shutdown are the covers put in place? \_\_\_\_\_

☐ No

27. Conveyorized degreaser is equipped with the following equipment for preventing cleaned parts from carrying out solvent liquid or vapor:

☐ None

☐ Rotating Basket

☐ Drying Tunnel

☐ Other, specify: \_\_\_\_\_

28. Air/vapor interface is: \_\_\_\_\_ sq ft  
Provide calculations below:

29. Identify safety switches that are installed and operating (check one or more):

☐ None of the below

☐ Condenser flow switch and thermostat which shuts off the sump heat if the condenser coolant is either not circulating or too warm.

☐ Device, other than a condenser flow switch and thermostat, which shuts off the sump heat if the condenser coolant is either not circulating or too warm.  
Specify: \_\_\_\_\_

☐ Spray safety switch which shuts off the spray pump if the vapor level drops below any fixed spray nozzle.

☐ Vapor level control thermostat which shuts off the sump heat when vapor level rises too high.

☐ Device, other than a vapor level control thermostat, which shuts off the sump heat when the vapor level rises too high.  
Specify: \_\_\_\_\_

30. Conveyorized degreaser has (check one or more).

☐ None of the below

☐ Refrigerated freeboard chiller

☐ Refrigerated condenser coils

☐ Carbon adsorption system (must complete Question 31)

☐ Other control system, excluding condenser coils and freeboard water jacket, which reduces solvent emissions. Describe system and specify minimum % control efficiency: \_\_\_\_\_



# CARBON ADSORPTION SYSTEM

31. Identify carbon adsorption systems and complete the following table:

| Carbon Adsorption System | Ventilation Rate<br>with Covers Open<br>(acfm) | Emissions Rate Averaged Over<br>One Complete Adsorption Cycle<br>(ppmv solvent) |
|--------------------------|--|---|
|                          |  |   |
|                          |  |   |
|                          |  |   |
|                          |  |   |

ATTACHMENTS

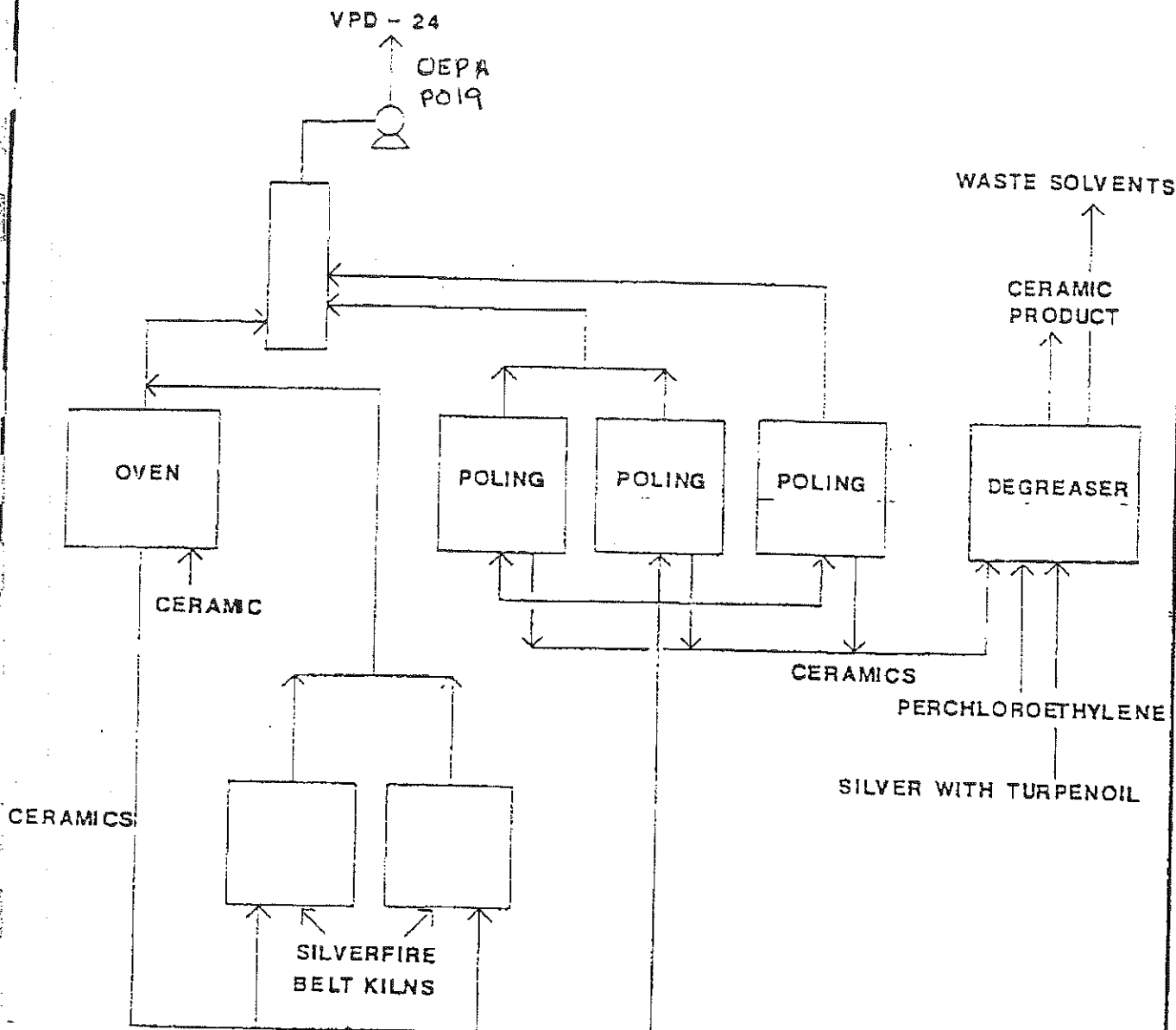
Morgan Matroc, Inc. Electro Ceramics Division

Abott Vapor Degreaser Tank - VPD-24

| Cleaning Solvent    | Specific Gravity (@25 C) | VOC Density (lb/gal) | Annual Usage (gallons) | Annual Operating Hours | Actual Annual VOC Emissions (Tons) | Max. Annual VOC Emissions (Tons) | Actual Hourly VOC Emission Rate (lb/Hr) | Max. Hourly VOC Emission Rate (lb/Hr) |
|---------------------|--------------------------|----------------------|------------------------|------------------------|------------------------------------|----------------------------------|---|---------------------------------------|
| Tetrachloroethylene | 1.62                     | 13.51                | 622                    | 5,880                  | 4.20                               | 4.62                             | 1.43                                    | 1.57                                  |

Equations:

$\text{Annual VOC emissions} = \text{VOC density (lb/gal)} * \text{Annual solvent usage (gallons)} / 2000 \text{ (lb/ton)}$   
 $\text{Max. VOC emissions} = \text{VOC density (lb/gal)} * (\text{Annual solvent usage (gallons)} + 10\% \text{ increase}) / 2000 \text{ (lb/ton)}$   
 $\text{Hourly VOC emissions} = \text{VOC density (lb/gal)} * \text{Annual solvent usage (gallons)} / \text{Annual operating hours}$   
 $\text{Max. Hourly VOC emissions} = \text{VOC density (lb/gal)} * (\text{Annual solvent usage (gallons)} + 10\% \text{ increase}) / \text{Annual operating hours}$



# TOXCON ENGINEERING COMPANY, INC. HOUSTON, TEXAS

|             |              |                |
|-------------|--------------|----------------|
| SCALE: NONE | APPROVED BY: | DRAWN BY Y. K. |
| DATE:       |              | REVISED 1      |

VERNITRON PIEZOELECTRIC DIVISION  
BEDFORD, OHIO

PROCESS FLOW DIAGRAM  
DEGREASER / POLING / HEATING

DRAWING NUMBER  
VPD - 24